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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,661	11/04/2003	Chin-Cheng Kuo	TAIW 187	6471

7590 02/18/2005

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EXAMINER

NGHIEM, MICHAEL P

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,661

Applicant(s)

KUO, CHIN-CHENG

Examiner

Michael P. Nghiem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to because “new” in step “300” of Fig. 3 should be – previous third – (see specification, page 5, line 25 – page 6, line 5). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is misdescriptive because:

- the step of comparing (line 8) does not determine whether the new sampling bit is a noise signal bit. Rather, it determines whether a second (previous third) sampling bit is a noise signal bit (specification, page 6, lines 4-5).
- the step of correcting (line 10) does not correct the noise signal bit based on the voltage level of the first sampling bit (of line 6) and the last sampling bit. Rather, it corrects based on the voltage level of the previous second (which now becomes first) and the last sampling bit (or new sampling bit). In other words, the first sampling bit (line 6) is not the same as the first sampling bit (line 10) and the new sampling bit (line 6) is the same as last sampling bit (lines 10-11).

It is noted that after a first sampling bit is stored, a previous second sampling bit becomes a first sampling bit, a previous third sampling bit becomes a second sampling bit, and the latest

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or new sampling bit becomes a third sampling bit (see specification, page 5, line 25 – page 6, line 5).

Thus, the Examiner proposes amending claim 1 as follows:

-- 1. A method for eliminating noise signals adopted for use in a radio signal receiving device to correct noise signals bits in sampling bits, the radio signal receiving device receiving series data from a computer peripheral device, the radio signal receiving device being connected to a computer system through a universal series bus (USB) for transmitting the series data to the computer system, the method comprising steps of:

receiving a new sampling bit and storing a first sampling bit from a plurality of sampling bits, a previous second sampling bit becomes a first sampling bit, a previous third sampling bit becomes a second sampling bit, and the new sampling bit becomes a last sampling bit;

comparing the voltage level of every sampling bit in the sampling data bits to determine whether the [[new]] second sampling bit is a noise signal bit; and

correcting the noise signal bit based on the voltage level of the first sampling bit and the last sampling bit of the sampling bits. --

The remaining claims are also rejected under 35 U.S.C. 112, second paragraph, for being dependent upon a rejected base claim.

Allowable Subject Matter

3. Claims 1-4 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Reasons For Allowance

4. The method as claimed wherein comparing the voltage level of every sampling bit in the sampling data bits to determine whether the second sampling bit is a noise signal bit and correcting the noise signal bit based on the voltage level of the previous second sampling bit and the last sampling bit of the sampling bits (claim 1) is not disclosed, suggested, or made obvious by the prior art of record.

Wu et al. (US 2003/0078772) discloses a noise reduction method (Fig. 2) which estimates the signal-to-noise ratio for each sub-band. However, Wu et al. does not disclose correcting the noise signal bit based on the voltage level of the previous second sampling bit and the last sampling bit of the sampling bits.

Hama et al. (US 2004/0105691) discloses a method of removing spike-like noises (Fig. 9) by removing the three largest (S242) and the three smallest data (S243) and then calculating the average of the remaining data (S244). However, it is not shown that

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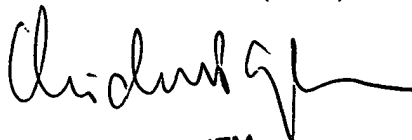
Hama et al. discloses correcting the noise signal bit based on the voltage level of the previous second sampling bit and the last sampling bit of the sampling bits.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P Nghiem whose telephone number is (571) 272-2277. The examiner can normally be reached on M-H.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MICHAEL NGHIEM
PRIMARY EXAMINER
Michael Nghiem

February 15, 2005